Academy
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" JAMAIS PLUS SIMPLE "

k	$-\infty$	-1	$+\infty$
$k+1$	$-$	ϕ	$+$

$f(x) = kx - k \Leftrightarrow (k+1)(x-1)^2 = -1 \quad (E)$

* si $k = -1$ on a $(E) \Leftrightarrow 0 = -1$ impossible

$$\mathcal{D}_{-1} \cap \mathcal{C} = \phi$$

* si $k > -1$; $(E) \Leftrightarrow (k+1)(x-1)^2 = -\frac{1}{+}$ impossible

$$\mathcal{D}_k \cap \mathcal{C} = \phi$$

* si $k < -1$; $(E) \Leftrightarrow (x-1)^2 = \frac{-1}{k+1} > 0$

$\Leftrightarrow (x-1) = \sqrt{\frac{-1}{k+1}}$ ou $(x-1) = -\sqrt{\frac{-1}{k+1}}$

Ainsi $\mathcal{C} \cap \mathcal{D}_k = \{ A', A'' \}$

Conclusion : si $k \geq -1$ $\quad \mathcal{C} \cap \mathcal{D}_k = \phi$

si $k < -1$ $\quad \mathcal{C} \cap \mathcal{D}_k = \{ A', A'' \}$

c) $I(2,3)$

$M' = S_I(M) \Leftrightarrow M * M' = I \Leftrightarrow \begin{cases} 2 = \frac{x + x'}{2} \\ 3 = \frac{y + y'}{2} \end{cases}$

$\Leftrightarrow \begin{cases} x' = 4 - x \\ y' = 6 - y \end{cases}$

$M(x,y) \in \mathcal{C}_g \Leftrightarrow y = g(x)$

$\Leftrightarrow y = 6 - f(4-x)$

$\Leftrightarrow 6 - y = f(4-x)$

$\Leftrightarrow y' = f(x')$

$\Leftrightarrow M'(x',y') \in \mathcal{C}_f$

$\Leftrightarrow S_I(M) \in \mathcal{C}_f$

d'où $\mathcal{C}_g = S_I(\mathcal{C}_f)$

Qarray.tn - Agra Blech - Qarray.tn